

Color: upper parts of head, body and fins lead gray; lower parts of same grayish white; tips of pectorals black; and tips of other fins dark.

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AN ADDITION TO THE CHELONIAN FAUNA OF MASSACHUSETTS.

None of the published lists¹ of the reptiles of Massachusetts include the Red-bellied Terrapin, *Pseudemys rubriventris* (Le Conte). As this turtle inhabits at least one locality in the Commonwealth, the fact should be brought to the attention of naturalists, and the occurrence definitely placed on record.

The Red-bellied Terrapin has been known for some years to inhabit certain ponds in Plymouth County, where it seems to remain localized. Specimens have been taken or observed in Gunners Exchange, Hoyt, Island, Nigger, Hallfield, Boot, Upper West, and Micajah's Ponds, and reported from several others. These turtles are attractive in appearance, young animals especially being very delicately marked. Roughly, their elongated form, the irregular red markings on the carapace and the red or yellowish tinted plastron make them at once conspicuous among our New England turtles. Adult specimens average ten to twelve inches (length of carapace—axial measurement).

They are very shy,² living in comparatively deep water, and are rapid swimmers. On warm, bright

1 (1) Catalogue of the Animals and Plants of Massachusetts, by Edward Hitchcock (1835).

(2) A Report on the Reptiles of Massachusetts, by D. H. Storer, M.D., Boston Journal of Natural History, Vol. III, 1840.

(3) Catalogue of the Reptiles and Batrachians found in the vicinity of Springfield, Mass., by J. A. Allen, Proc. B. S. N. H., Vol. XII, 1868, (additional list 1870).

(4) List of the Reptilia, Fauna of New England, by Samuel Henshaw. Occasional Papers of the B. S. N. H., Vol. VII, 1904.

2 I am indebted to Mr. Henry J. Thayer for information regarding the habits of these turtles.

days they can be seen sunning themselves on rocks in the water, but always ready to disappear at the slightest sign of danger. They are difficult to approach, although specimens have been obtained by swimming up to and taking them by surprise. During the breeding season (June, in this region), they have been found at considerable distances from water.³ The nests are found in sandy soil, the female depositing her eggs about two inches deep and carefully smoothing over the surface above the nest afterward. Without doubt many of these are destroyed by skunks, which "smell out" and devour the eggs of all our turtles each year. This cause alone is sufficient to prevent rapid increase in numbers. These terrapins are active here from May to October, with the exception of a short period in August, when they are said to disappear.⁴

Holbrook,⁵ in discussing the habits of this species, says it is found in "streams and rivers of running water, generally preferring those with rocky beds." In the as yet unpublished "Survey of Inland Waters of Massachusetts," by the State Commissioners of Fisheries and Game, I find the following data regarding three of the larger ponds in which these turtles are abundant: *Gunners Exchange Pond*: "Greatest depth 25 ft.; middle west shore boggy; several wide sand beaches; bottom muddy." *Boot Pond*: "Area 74 acres; greatest depth 31 ft.; bottom, slight accumulation." *Island Pond*: "Area 50 acres; bottom, pebbles, stone, gravel, and brown mud." Thus it appears that a rocky bed is not an essential factor in its environment.

³ Dr. F. A. Lucas writes me that he found a large specimen in 1913 in the middle of the road, half a mile from Crooked Pond. He also has seen a broken shell found near Sparrow's Hill, one-half mile from Billington Sea.

⁴ Mr. Thayer reports finding on one occasion in May, a specimen which had just died, in which the only indication of disease or injury was a nasal hemorrhage. He thinks numbers die from this affection each year.

⁵ North American Herpetology, Vol. I, J. E. Holbrook, M.D., 1842, p. 55.

Formerly its range was considered very limited. Holbrook⁶ (1842) states that it does not extend north of the Delaware River, or south of Chesapeake Bay, although abundant within those limits. This includes the Pine Barrens of New Jersey: DeKay⁷ gives the "neighborhood of the city of New York" as its extreme northern limit and states that it is not found farther south than Virginia. Agassiz⁸ says "it extends only from New Jersey to Virginia." Ditmars,⁹ however, in 1908, makes its distribution much wider, as follows: "Occurs in eastern Ohio, Pennsylvania, New Jersey, Delaware, Maryland, the two Virginias, and northern North Carolina." This Massachusetts record, therefore, establishes a new northern limit of distribution.

This species is the *Ptychemys rugosa* of Agassiz, drawings of which appear on Plates XXVI and XXVII in Vol. II of his "Contributions to the Natural History of the United States of America." His specimens came from Washington, D. C. There are three specimens from Plymouth in the collection of the Museum of Comparative Zoology at Cambridge,¹⁰ and one in the collection of the Boston Society of Natural History.¹¹

Commercially these terrapins are known as "Sliders" and are assuming an important role in the localities where they are abundant, as a substitute for the more expensive "Diamond-back." The flesh is said to have an excellent flavor.

⁶ Ibid.

⁷ Zoology of New York, Part III, James E. DeKay, 1842, p. 16.

⁸ Contributions to the Natural History of the United States of America, Vol. I, Louis Agassiz, 1857, p. 432.

⁹ The Reptile Book, R. L. Ditmars, 1908, p. 39.

¹⁰ (1) Specimen from Upper West Pond. Collected October, 1905, by F. A. Lucas.

(2) Specimen from Boot Pond. Collected July, 1912, by H. J. Thayer, weight 10 pounds.

(3) Specimen from Gunner's Exchange Pond. Collected July, 1912, by H. J. Thayer.

¹¹ Specimen from Hillfield Pond, Plymouth. Collected June 19, 1916, by H. L. Babcock. Length of carapace, 11 $\frac{3}{8}$ inches. Male.

Why this species remains confined only to certain ponds of a large number which are situated in Plymouth County, and why this locality is so isolated from the rest of its range, are questions which require further study. The fact remains that this terrapin is an interesting addition to the fauna of Massachusetts.

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[Director Frederic A. Lucas, of the American Museum of Natural History, with whom the editor has frequently discussed the occurrence of *Pseudemys* at Plymouth, has kindly furnished the following notes.—J. T. N.]

OCCURRENCE OF PSEUDEMYIS AT PLYMOUTH, MASS.

Having been the first, so far as I am aware, to recognize the occurrence of *Pseudemys rubriventris* at Plymouth, Mass., I am glad of the opportunity to present a few notes in regard to the species.

In 1869 I found the carapace of what I now know to be this species lying by the roadside on Sparrow's Hill, about half a mile from Billington Sea. At the time I was acquainted only with the local species of turtles and simply recognized the carapace as belonging to some species that I had never seen, but suggestive of a huge "snake" turtle (the local name for the Painted Terrapin).

From 1869 to 1905 I saw very little of Plymouth. On September 15, 1905, I took two fully grown females of *Pseudemys rubriventris* in Upper West Pond. They were fighting and held on to each other so tenaciously that they allowed themselves to be taken into the boat with my landing net and did not let go for some time. As a matter of record, one of these specimens was sent to the Museum of Comparative Zoology and one to the U. S. National Mus-